COUNCIL OF MINISTERS

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SECOND STAGE OF THE BIOMOLECULAR ENGINEERING R & D PROGRAMME

The Council adopted the decision on the second stage (January 1984 to March 1986) of the multiannual research and training programme for the European Economic Community in the field of biomolecular engineering.

This decision follows that of 1981 on a first stage (with 8 MECU and a staff of 3) which was completed extremely successfully, 169 applications being made in response to the invitation to tender. Because of the limited funds available only 51 projects could be taken up. Of the other 118 applications, many were of excellent scientific quality.

The second stage of the programme will have a budget of 7 MECU and an increase of two in the staff. The scientific specifications and characteristics of the programme are set out in the Annex.

It should be noted that this programme will later be incorporated in the biotechnology action plan proposed by the Commission.

FIRST R & D PROGRAMME ON INFORMATION TECHNOLOGY - ESPRIT

Following the European Council meeting in Stuttgart, which expressed its political support at the highest level for the ESPRIT programme, for its European significance and for the high priority attaching to its completion, the special Council responsible for preparing for the European Council meeting in Athens issued a brief, at its October meeting, to the Research Council to prepare a decision on this important programme.

The Council accordingly examined in detail certain outstanding key questions concerning the implementation of the programme, namely the overall budget considered necessary for the five-year period, the staffing level required for proper execution and certain programme-management details such as the role of the Consultative Committee.

Concluding its discussion, the Council agreed to continue its consideration of this matter and of the other items on the agenda on 5 November next.

ANNEX

1. Research actions

1.1. Development of second generation bioreactors (multienzymatic, multiphase or requiring a co-factor) for detoxification and for industrial applications including agro-food applications. Research activities are also included in this sector focusing upon:

- the study of the physiology and the stability of cell populations, including genetically manipulated cells, in relation with whole cell immobilization;
- the analysis of enzyme inactivation and the preservation of activity in immobilized systems (particularly under non-physiological conditions characteristic of high-salinity, non-aqueous, high-temperature and extreme pH environments).

1.2. Improved production, by means of biomolecular engineering methods, of substances for:

- animal husbandry (particularly vaccines and hormones),
- agro-food industries.

1.3. Upgrading of plant products, particularly ligno-cellulose, by means of biomolecular engineering methods.

1.4. Improvement, by means of genetic engineering, of plants and micro-organisms which play an important role in agriculture. Research activities in this sector are to include:

- the characterization of the structure and the expression of microbial and plant genomes, including organelles of DNA and plasmid DNA,
- the study of the molecular mechanisms of interactions between plants and symbiotic micro-organisms and the improvement by genetic engineering of these symbiotic relations,
- the development of methods for the identification, transfer and expression of new genetic information in cultivated plant species,
- the control of regeneration and differentiation of plant cells and plant protoplasts into mature and fertile plants,
- the use of biomolecular engineering for the early detection of genetic or pathogenic changes in plants.

1.5. Development of methods for detecting contamination and for the assessment of possible risks associated with applications of biomolecular engineering in agriculture and industry.

The financial resources for the execution of research actions shall not be lower than 80% of the total budget allocated to the second stage of the programme.

2. Training

2.1. Development of new reactors using immobilized multi-enzyme systems, including those requiring multi-phase environment and co-factor regeneration;

2.2. Development of bio-reactors for human detoxification;

2.3. The transfer of genes from diverse sources to the bacterium Escherichia coli, the yeast Saccharomyces cerevisiae and other suitable organisms;

2.4. Development of cloning systems;

2.5. Gene transfer in micro-organisms and in plants important to agriculture;

2.6. Improvement of methods for detecting contamination and for the assessment of possible risks associated with applications of biomolecular engineering in agriculture and industry.

The financial resources for the execution of this training action shall not exceed 20% of the total budget allocated to the second stage of the programme.
